In the Claims:

Please cancel claim 37, and amend claims 2 and 44.

1. (Original) A medium operable to have at least one frequency band in which both effective permeability and effective permittivity are negative simultaneously, the medium comprising:

a negative permeability medium; and

a negative permittivity medium spatially combined with said negative permeability medium to form the composite medium having a frequency band in which both effective permeability and effective permittivity are negative.

2. (Amended) The composite left-handed material according to claim 1 wherein elements forming ~~both~~ the negative permittivity composite medium ~~and the negative permeability composite medium~~ are superconducting.

3. (Original) The medium of claim 1, wherein both the effective permittivity and the effective permeability have the value –1 at some frequency.

4. (Original) The medium of claim 1, wherein said negative permittivity medium comprises a composite medium of elements which collectively exhibit a negative permittivity over at least one band of frequencies.

5. (Original) The medium of claim 1, wherein said negative permeability medium comprises a composite medium of elements which collectively exhibit a negative permeability over at least one band of frequencies.

6. (Original) The medium of claim 1, wherein at least a portion of the medium may be modulated.

7. (Original) The medium of claim 6, wherein said at least a portion of the medium exhibits a nonlinear modulation response.

8. (Original) The medium of claim 7, wherein said at least a portion of the medium responds to an electric field.

9. (Original) The medium of claim 6, wherein said at least a portion of the medium is operable to be modulated between a left-handed and right-handed medium.

10. (Original) The medium of claim 6, wherein said at least a portion of the medium is operable to be modulated between a propagating and non-propagating medium.

11. (Original) The medium of claim 6, wherein said negative permittivity medium comprises a modulable permittivity medium spatially combined with said negative permeability medium, the modulable permittivity medium responding to one or more stimuli to be modulable from within or without between one value of a negative permittivity and another value of a negative permittivity.

12. (Previously Presented) The medium of claim 11, wherein the medium transmits a selected band of frequencies at one value of modulable permittivity, and transmits another selected band of frequencies at another value of modulable permittivity.

13. (Original) The medium of claim 6, wherein said negative permittivity medium comprises a modulable permittivity medium spatially combined with said negative permeability medium, the modulable permittivity medium responding to one or more stimuli to be modulable from within or without between a negative permittivity and a positive permittivity, to form with the negative permeability, when switched to a positive permittivity, a non-propagating composite medium.

14. (Original) The medium of claim 6, wherein said negative permeabiliity medium comprises a modulable permeability medium spatially combined with said negative permittivity medium, the modulable permeability medium responding to one or more stimuli to be modulable from within or without between one value of a negative permeability and another value of negative permeability.

15. (Previously Presented) The medium of claim of 14, wherein the medium transmits a selected band of frequencies at one value of modulable permeability, and transmits another selected band of frequencies at another value of modulable permeability.

16. (Original) (Blank)

17. (Original) The medium of claim 6, wherein said negative permeability medium comprises a modulable permeability medium spatially combined with said negative permittivity medium, the modulable permeability medium responding to one or more stimuli to be modulable from within or without between a negative permeability and a

positive permeability, to form with the negative permittivity medium, when switched to a positive permeability, a non-propagating composite medium.

18. (Original) The medium of claim 6, wherein said medium includes an element to stimulate modulation of said permittivity medium from within.

19. (Original) The medium of claim 6, wherein said medium includes an element to stimulate modulation of said permeability medium from within.

20. (Original) The medium of claim 6, wherein said modulation comprises modulation of said permittivity medium and said permittivity medium modulates in response to an external stimulus.

21. (Original) The medium of claim 6, wherein said modulation comprises modulation of said permeability medium and said permeability medium modulates in response to an external stimulus.

22. (Original) The medium of claim 1, wherein said negative permittivity medium comprises a gas plasma which may be modulated.

23. (Previously Presented) A left handed composite medium having a frequency band in which both effective permeability and effective permittivity are negative simultaneously, the left handed composite medium comprising:

a supporting substrate;

an array of elements each of which contributes with other elements of said array to define negative permeability composite medium having a negative permeability over a band of frequencies in said frequency band; and

an array of elements arranged, with said negative permittivity composite medium by said substrate, each of said elements contributing with other elements of said array to define an composite medium having a negative permittivity composite medium, the combination of said negative permeability composite medium and said negative permittivity composite medium defining a composite effective medium having a negative permittivity and a negative permeability over at least one common band of frequencies.

24. (Previously Presented) The left handed medium of claim 23, wherein said negative permeability composite medium comprises arrays of solenoidal resonator conductive elements.

25. (Previously Presented) The left handed medium of claim 23, wherein said negative permeability composite medium comprises arrays of split ring resonator conductive elements.

26. (Previously Presented) The left handed composite medium of claim 25, wherein each said split ring conductive element comprises a split rectangular conducting resonator.

27. (Previously Presented) The left handed medium of claim 23, wherein said negative permeability composite medium comprises arrays of "G" conductive elements.

28. (Previously Presented) The left handed medium of claim 23, wherein said negative permeability composite medium comprises arrays of Swiss roll resonator conductive elements.

29. (Previously Presented) The left handed medium of claim 23, wherein said negative permeability composite medium comprises arrays of spiral resonator conductive elements.

30. (Previously Presented) The left handed medium of claim 23, wherein each said negative permittivity composite medium comprises a low resistance conducting path arranged adjacent to a corresponding solenoidal resonator conductive element and perpendicular to the axis of the corresponding solenoidal resonator conductive element.

31. (Previously Presented) The left handed medium of claim 23, wherein each said negative permittivity composite medium comprises a conducting wire arranged adjacent to a corresponding solenoidal resonator conductive element and perpendicular to the axis of the corresponding solenoidal resonator conductive element.

32. (Previously Presented) The left handed medium of claim 23, wherein each said negative permittivity composite medium comprises a conducting path defined by a confined plasma arranged adjacent to a corresponding solenoidal resonator conductive element and perpendicular to the axis of the corresponding solenoidal resonator conductive element.

33. (Previously Presented) The left-handed composite medium of claim 23, wherein each said negative permittivity composite medium comprises a conducting path defined by a confined plasma arranged adjacent to a corresponding solenoidal resonator conductive element.

34. (Previously Presented) The left handed composite medium of claim 23, wherein said substrate comprises a piezoelectric medium.

35. (Previously Presented) The left handed composite medium of claim 23, wherein said substrate comprises magnetostrictive medium.

36. (Previously Presented) The left handed composite medium of claim 23, further comprising a scattering defect within the composite left-handed medium.

37. (Cancel)

38. (Previously Presented) The left handed medium of claim 37, wherein said concentric conductive elements comprise concentric split rectangular elements.

39. (Previously Presented) The left handed medium according to claim 37, wherein said concentric conductive elements comprise concentric split rings.

40. (Previously Presented) The left handed medium according to claim 37, wherein each of said units not on an outer edge of said medium includes two sections of orthogonal substrate, each of said two sections including one of said concentric conductive elements on a surface thereof, and each having an associated conducting wire.

41. (Previously Presented) The left handed medium according to claim 40, wherein multiple concentric conductive elements are linearly arranged in series on each of said two sections of each of said units not on an outer edge of said medium.

42. (Original) The left handed medium according to claim 41, wherein multiple concentric conductive elements are linearly arranged in series on each of said two sections of each of said units not on an outer edge of said medium.

43. (Previously Presented) The medium of claim 42, wherein means are introduced that permit the adiabatic absorption along any direction of propagation within said medium.

44. (Amended) The medium of claim 43, wherein means are introduced that permit ~~the~~ adiabatic absorption along any direction of propagation within said medium.